Claims

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1. Compound of the formula (I)

$$R^{1} \longrightarrow R^{4}$$

$$R^{2} \longrightarrow R^{3}$$

$$O \longrightarrow R^{4}$$

$$O \longrightarrow R^{4$$

in which

A is (C₆-C₁₀)-aryl or 5- to 10-membered heteroaryl, each of which may be substituted up to three times, identically or differently, by substituents selected from the group of halogen, cyano, nitro, trifluoromethyl, trifluoromethoxy, (C₁-C₆)-alkyl, (C₂-C₆)-alkynyl and (C₁-C₆)-alkoxy,

or

is a group of the formula

n is the number 1, 2 or 3,

R¹ and R² are identical or different and are independently of one another hydrogen, halogen, cyano, nitro, trifluoromethyl, trifluoromethoxy, (C₁-C₆)-alkyl or (C₁-C₆)-alkoxy,

R³ is (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl or (C₂-C₈)-alkynyl, each of which may be substituted by phenyl, (C₃-C₈)-cycloalkyl, hydroxy, (C₁-C₆)-alkoxy, (C₁-C₆)-acyloxy or amino,

and

R⁴ is a group of the formula -OR⁷ or -NR⁸R⁹, in which

 R^7 is hydrogen or (C_1-C_6) -alkyl,

R⁸ and R⁹ are identical or different and are independently of one another hydrogen, (C₁-C₆)-alkyl or (C₃-C₈)-cycloalkyl, each of which may be substituted by substituents selected from the group of carboxyl, (C₁-C₆)-alkoxycarbonyl, aminocarbonyl, mono- and di-(C₁-C₆)-alkylaminocarbonyl,

or

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R⁸ and R⁹ form together with the nitrogen atom to which they are bonded a 4- to 8-membered heterocycle which may comprise a further ring heteroatom from the series N-R¹⁰, O, S, SO or SO₂ and may be substituted by substituents selected from the group of hydroxy, oxo, amino, (C₁-C₆)-alkyl, carboxyl, (C₁-C₆)-alkoxycarbonyl, aminocarbonyl, mono- and di-(C₁-C₆)-alkylaminocarbonyl, in which

 (C_1-C_6) -alkyl in turn may be substituted by substituents selected from the group of hydroxy, amino, carboxyl, (C_1-C_6) -alkoxycarbonyl, aminocarbonyl, mono- and di- (C_1-C_6) -alkylaminocarbonyl,

and

 R^{10} is hydrogen, (C_1-C_4) -alkyl, (C_1-C_4) -acyl or (C_1-C_4) -alkoxycarbonyl, and the salts, solvates and solvates of the salts thereof.

2. Compound of the formula (I) according to Claim 1, in which

20 A is phenyl, naphthyl or pyridyl, each of which may be substituted up to twice, identically or differently, by substituents selected from the group of fluorine, chlorine, bromine, cyano, trifluoromethyl, trifluoromethoxy, (C₁-C₄)-alkyl, (C₂-C₄)-alkynyl and (C₁-C₄)-alkoxy,

or

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n is the number 1, 2 or 3,

- R¹ is hydrogen, fluorine, chlorine, cyano, trifluoromethyl, trifluoromethoxy, (C₁-C₄)-alkyl or (C₁-C₄)-alkoxy,
- R² is hydrogen,
- R^3 is (C_1-C_6) -alkyl or (C_2-C_6) -alkenyl, each of which may be substituted by phenyl, (C_3-C_6) -cycloalkyl or hydroxy,

and

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- R⁴ is a group of the formula $-OR^7$ or $-NR^8R^9$ in which
 - R⁷ is hydrogen,

R⁸ and R⁹ are identical or different and are independently of one another hydrogen, (C₁-C₆)-alkyl or (C₃-C₆)-cycloalkyl, each of which may be substituted by substituents selected from the group of carboxyl, (C₁-C₄)-alkoxycarbonyl, aminocarbonyl, mono- and di-(C₁-C₄)-alkylaminocarbonyl,

or

R⁸ and R⁹ form together with the nitrogen atom to which they are bonded a 5- to 7-membered heterocycle which may comprise a further ring heteroatom from the series N-R¹⁰ and O and may be substituted by substituents selected from the group of hydroxy, oxo, amino, (C₁-C₄)-alkyl, carboxyl, (C₁-C₄)-alkoxycarbonyl, aminocarbonyl, mono- and di-(C₁-C₄)-alkylaminocarbonyl, in which

 (C_1-C_4) -alkyl in turn may be substituted by substituents selected from the group of hydroxy, amino, carboxyl, (C_1-C_4) -alkoxycarbonyl, aminocarbonyl, mono- and di- (C_1-C_4) -alkylaminocarbonyl,

and

- R¹⁰ is hydrogen, (C₁-C₄)-alkyl, (C₁-C₄)-acyl or (C₁-C₄)-alkoxycarbonyl,
- and the salts, solvates and solvates of the salts thereof.
 - 3. Compound of the formula (I) according to Claim 1 or 2, in which

A is phenyl which may be substituted once or twice, identically or differently, by fluorine, chlorine, bromine, methyl, ethyl, ethynyl or methoxy, is naphthyl or is a group of the formula

5 n is the number 1,

R¹ is hydrogen, chlorine, methyl or trifluoromethyl,

R² is hydrogen,

 R^3 is (C_1-C_6) -alkyl, (C_2-C_6) -alkenyl or is benzyl,

and

10 R⁴ is a group of the formula $-OR^7$ or $-NR^8R^9$ in which

R⁷ is hydrogen,

 R^8 and R^9 are identical or different and are independently of one another hydrogen or (C_1-C_6) -alkyl which may be substituted by carboxyl or (C_1-C_4) -alkoxycarbonyl,

15 or

R⁸ and R⁹ form together with the nitrogen atom to which they are bonded a 5- to 6-membered heterocycle which may comprise a further ring heteroatom from the series N-R¹⁰ and O and may be substituted by substituents selected from the group of hydroxy, oxo, amino, (C₁-C₄)-alkyl, carboxyl, (C₁-C₄)-alkoxycarbonyl, aminocarbonyl, mono- and di-(C₁-C₄)-alkylaminocarbonyl, in which

 (C_1-C_4) -alkyl in turn may be substituted by substituents selected from the group of hydroxy, amino, carboxyl, (C_1-C_4) -alkoxycarbonyl, aminocarbonyl, mono- and di- (C_1-C_4) -alkylaminocarbonyl,

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and

 R^{10} is hydrogen, (C_1-C_4) -alkyl or (C_1-C_4) -acyl,

and the salts, solvates and solvates of the salts thereof.

4. Compound of the formula (I-A)

$$R^1$$
 R^3
 O
 R^4
 $(I-A)$

5 in which

A is phenyl which may be substituted once or twice, identically or differently, by fluorine, chlorine, bromine, methyl, ethynyl or methoxy, or is a group of the formula

R¹ is chlorine, methyl or trifluoromethyl,

 R^3 is (C_1-C_6) -alkyl or (C_2-C_6) -alkenyl,

and

R⁴ is a group of the formula -OR⁷ or -NR⁸R⁹ in which

R⁷ is hydrogen,

R⁸ and R⁹ are identical or different and are independently of one another hydrogen or (C₁-C₆)-alkyl which may be substituted by carboxyl or (C₁-C₄)-alkoxycarbonyl,

or

R⁸ and R⁹ form together with the nitrogen atom to which they are bonded a 5- to 6membered heterocycle which may comprise a further ring heteroatom from

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the series N-R¹⁰ and O and may be substituted by substituents selected from the group of hydroxy, oxo, amino, (C_1-C_4) -alkyl, carboxyl, (C_1-C_4) -alkoxycarbonyl, aminocarbonyl, mono- and di- (C_1-C_4) -alkylaminocarbonyl, in which

 (C_1-C_4) -alkyl in turn may be substituted by substituents selected from the group of hydroxy, amino, carboxyl, (C_1-C_4) -alkoxycarbonyl, aminocarbonyl, mono- and di- (C_1-C_4) -alkylaminocarbonyl,

and

 R^{10} is hydrogen, (C_1-C_4) -alkyl or (C_1-C_4) -acyl,

and the salts, solvates and solvates of the salts thereof.

5. Process for preparing a compound of the formula (I) or (I-A) as defined in Claims 1 to 4, characterized in that compounds of the formula (II)

$$R^{1}$$
 R^{2}
 O
(II),

in which R¹, R² and A each have the meanings indicated in Claims 1 to 4,

are firstly reacted in an inert solvent in the presence of a base with a compound of the formula (III)

$$X^{1} - (CH_{2})_{n}$$
(III),

in which n has the meanings indicated in Claims 1 to 4,

T is (C₁-C₄)-alkyl or benzyl

20 and

X¹ is a suitable leaving group such as, for example, halogen, mesylate or tosylate,

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to give compounds of the formula (IV)

in which R1, R2, A, T and n each have the abovementioned meanings,

subsequently converted in an inert solvent in the presence of a suitable base, preferably a phosphazene base, with a compound of the formula (V)

$$R^3-X^2 \qquad (V),$$

in which R3 has the meanings indicated in Claims 1 to 4, and

 X^2 is a suitable leaving group such as, for example, halogen, mesylate or tosylate, into compounds of the formula (VI)

$$R^{1} \longrightarrow N - (CH_{2})_{n}$$

$$(VI),$$

in which R¹, R², R³, A, T and n each have the abovementioned meanings,

the latter are converted by basic or acidic hydrolysis, or in the case where T is benzyl also by hydrogenolysis, into carboxylic acids of the formula (VII)

in which R1, R2, R3, A and n each have the abovementioned meanings,

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and then converted by methods known from the literature for the esterification or amidation of carboxylic acids into the compounds of the formula (I) or (I-A),

and the compounds of the formula (I) or (I-A) are reacted where appropriate with the appropriate (i) solvents and/or (ii) bases or acids to give the solvates, salts and/or solvates of the salts thereof.

- 6. Compound as defined in any of Claims 1 to 4 for the treatment and/or prophylaxis of diseases.
- 7. Use of a compound as defined in any of Claims 1 to 4 for producing a medicament for the treatment and/or prevention of dyslipidaemias, arteriosclerosis, restenosis and ischeamias.
- Medicament comprising a compound as defined in any of Claims 1 to 4 in combination with a further active ingredient selected from the group consisting of cholesterol-lowering statins, cholesterol absorption inhibitor, HDL-elevating or triglyceride-lowering and/or apolipoprotein B-lowering substances, oxidation inhibitor and compounds having antiinflammatory activity.
- 15 9. Medicament comprising a compound as defined in any of Claims 1 to 4 in combination with an inert, non-toxic, pharmaceutically suitable excipient.
 - 10. Medicament according to Claim 8 or 9 for the treatment and/or prevention of dyslipidaemias, arteriosclerosis, restenosis and ischaemias.
- Method for the treatment and/or prevention of dyslipidaemias, arteriosclerosis, restenosis and ischaemias in humans and animals by administering an effective amount of at least one compound as defined in any of Claims 1 to 4, or of a medicament as defined in any of Claims 8 to 10.